

Research Article - Peer reviewed

## Use of WIL definitions in research – a collaborative learning research process

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### Abstract

The work-integrated learning (WIL) research field is rapidly expanding. Diverse understandings of what WIL is or a lack of definitions in often cited articles can provide a challenge for future researchers of WIL. The twofold aim of this study was to explore the use of definitions of WIL in often-cited WIL scientific articles and to explore the feasibility of a structured co-creative scientific writing method and the perceived value of performing this collaborative research project. This project is innovative concerning the design of the project and through the intention to provide both WIL in PhD education and lead to research outcomes that promote WIL research. The ontological findings showed that there were several groups of definitions. The findings of the collaborative analysis of extracted definitions showed diverse usage of definitions. In extracting WIL definitions from literature cited in WIL publications, four main findings occurred: *Intertwining concepts*, *Intentions of WIL*, *Implementation of WIL* and *Diversity in defining WIL*. As WIL research is gaining ground, it requires further refinement of WIL definitions. The results emphasise the need to develop a concept of WIL, capturing WIL as a phenomenon rather than various practices related to education or organizational structures. The collaborative research project proved to be a feasible way of including WIL in PhD education. Therefore, the findings are relevant for WIL researchers to develop the understanding of the importance of WIL definitions in various contexts for the future, but also as a methodological way of integrating WIL activities in PhD education.

Keywords: Collaborative academic writing, Definitions, Future researchers, Work-integrated learning

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## Introduction

As the work-integrated learning (WIL) research field is expanding (Amarathunga, 2024; Areskoug Josefsson et al., 2024), knowledge of how WIL definitions are linked, how their usefulness is understood for future researchers, and potential development areas of WIL is of interest to explore further. Definitions provide clarity and pertinence of research findings in academic writing (Triki, 2019). However, if there are diverse understandings of what WIL is or if often cited articles lack a definition of WIL, this provides a challenge for future researchers of WIL.

WIL is a complex construct that can be seen as an inclusive term covering a range of related work-focused learning models (Zegwaard et al., 2023), and WIL is also expanding as a discipline beyond the mainstream framing of WIL only as a pedagogical method (Piper et al., 2023). WIL can thus be considered “a multidimensional learning phenomenon” (Björck & Willermark, 2024, p. 2) that engages students as well as professionals during their educational experiences in working life.

There are different definitions of WIL and variations in how those definitions are understood and used (Zegwaard et al., 2023). Ferns et al (2025) conclude that “components such as stakeholder partnerships, authenticity, purposeful integration, assessment design, and active engagement, [...] are crucial to the successful development of [...] WIL” (p. 380-381). Despite global research interest in WIL (Amarathunga, 2024; Areskoug Josefsson et al., 2024), WIL is not easy to assess in the research literature as there are tendencies for ambiguity and avoidance concerning the term WIL (Björck & Willermark, 2024). Nevertheless, the expansion of WIL research is also related to technological advancements and increased needs of ongoing education and lifelong learning throughout working life. As WIL advances, the applications of WIL and the settings in which it is developed also evolve, which in turn demands adaption and evolvement of the understanding of WIL (Zegwaard et al., 2023).

The aim of this paper is to explore the use of WIL definitions in often-cited WIL scientific articles and to explore the feasibility of a structured co-creative scientific writing method and the perceived value of performing this collaborative research project. In this paper, we use the term WIL, which also includes perspectives of work-integrated education (WIE) since WIL is more frequently used to refer to WIE than the term WIE itself (Sunnemark et al., 2023). Further exploration of how definitions of WIL are used in different contexts is needed to gain a deeper understanding of the “what” and the “how” of WIL in research practice. Zegwaard et al. (2023) have critiqued older WIL definitions for not being definitions even if they are being used as such. This critique is relevant and adds to the need of understanding how these terms are being used as definitions, in which contexts, and how future research can be better in using clear definitions of WIL.

This research project is a collaborative process designed to involve future WIL researchers, namely PhD students. WIL is often limited in PhD education (Bracewell et al., 2024; Massyn & Areskoug Josefsson 2024), and this project may provide further knowledge of how WIL can be included in PhD education. Furthermore, it is an interdisciplinary collaboration that brings together researchers from diverse academic backgrounds in business, healthcare, education, cultural studies, and library sciences. In addition, this process includes PhD students from the multidisciplinary WIL PhD education at University West, who have been invited to be active participants throughout the process. The invitation of PhD students stemmed from the quality assessment of the PhD education, where the PhD students wished for additional fellow WIL research activities across projects and disciplines. Additionally, the need to explore definitions of WIL further in their research context was also brought up. Thereby, this engagement is also part of the university’s quality culture, which adheres to the perspective that quality cannot be predefined by experts, instead quality is a shared aim to contribute to together (Nygren-Landgärds et al., 2024).

## Aim

The aim of this study is to explore the use of definitions of WIL in often-cited WIL scientific articles. A secondary aim is to explore the feasibility of a structured co-creative scientific writing method and the perceived value of performing this collaborative research project.

## Methods

This project was undertaken across four major phases: Design and locating, Data extraction, Ontological mapping and Collaborative writing and analysis.

The design of the research project was led by the core research group, i.e., KAJ, EN, DM, and FS. The study is based on scientific articles using the term work-integrated learning indexed in the Scopus database. The sample of highly cited articles were identified in a previous bibliographic review (Areskoug Josefsson et al., 2024), performed as a structured literature search in Scopus with the exact phrases: {work-integrated learning} OR {work integrated learning} OR {work-integrated education} OR {work integrated education} in ALL FIELDS. The search strategy was a result of the collaboration between experienced librarians and experts within the research discipline. From the bibliographic review, often cited publications were retrieved, with the intention of using publications having more than 70 citations (92 publications). The inclusion criteria were peer-reviewed scientific articles with WIL in the main body of text in the article. The core research group screening process led to 35 articles being included for the start of the project.

All University West PhD students in the research field of WIL received an invitation to participate in data extraction workshops, and ten PhD students agreed to join. During data extraction, the research group extracted text and citations from full-text articles that defined WIL. Texts discussing benefits, challenges, implementation, or assessment of WIL were not extracted. This distinction is how this method differs from a bibliographic analysis as citations are purposefully and manually selected based on a specific criterion. The next phase included inviting the PhD students who participated in the data extraction workshops to participate in the collaborative writing and analysis phase, which three PhD students accepted. After this, two parallel processes took place. The primary process was collaborative writing and analysis, where the participants used their writing process to further reflect on and explore the WIL definitions in context. The process of collaborative writing and analysis also included further data exploration. The steps of data extraction, collaborative writing and analysis are described in steps 1-5 (described in full detail in Appendix 1):

1. Data extraction
  - a. Piloting the data extraction excel file to ensure consensus among the core research group (extraction of metadata, found definition/definitions (with used citation/citations), how the definition was understood to be used in the publication).
  - b. online workshop where ten PhD students extracted data individually from five to six articles.
2. Compiling preliminary results
  - a. Compilation of results to a Miro board (an online shared whiteboard)
  - b. online workshop with eight PhD students and the core research group to discuss the found definitions, the value of them for their PhD research projects, and WIL practice and research in general. Presentation of linkage between the found definitions and which newfound cited definitions needed to be extracted from citations in the first data sample.
3. Data extraction
  - a. Data extraction from additional identified definition articles added to the Miro board.
4. Compiling results
  - a. Revision of Miro board presentation and adding a narrative to be used in the collaborative writing and analysis process.
5. Collaborative writing and analysis
  - a. Draft of manuscript by facilitator.
  - b. Collaborative two-week writing process in two groups of PhD students and core researchers (30 minutes of daily asynchronous writing and analysis individually in a shared group document). Continuous dialogue and addressing queries by using post-it notes on the Miro board.
  - c. Compilation of the documents from each writing group to one manuscript draft by facilitator.
  - d. Collaborative two-week writing process in one group
  - e. Consensus online meeting by all participants prior to the facilitator finalising the manuscript.

The secondary process involved an ontological mapping of the WIL definitions; this work was guided by a previous ontological mapping process described by Masterson et al. (2022). The full text of the extracted citations from the previous phase were located and definitions from these ‘second-level’ articles were sourced. At this phase, related concepts (e.g. work-based learning) were also extracted as preliminary findings showed the terms being used interchangeably. Newly located references were mapped onto the digital whiteboard, and citation lines were drawn to connect sources and cited definitions. This process continued until the research group could no longer locate definitions in a cited article. This means that also older articles are relevant for ontological mapping. This method allowed for a visual analysis of the authors and articles who cite each other to inform their definition. The articles were positioned based on publication date (Y-axis) and then positioned based on their definition connection (X-axis). The articles were then colour-coded based on the title of the article, author and definition to support the visual presentation for the analysis.

The identification and data extraction process were intertwined, as the data extraction continued throughout the collaborative writing process. In summary, the initial base of 35 articles was explored in the first PhD workshop, where 7 articles were excluded for not presenting sufficient text on WIL to allow analysis. All the definitions within those 28 included articles were fully extracted, identifying 58 cited publications with definitions of WIL. This process of extracting cited definitions continued until definitions of WIL could no longer be extracted. This led to a further 57 cited publications and a total of 143 publications.

### *Ethics*

All participating PhD students gave their informed written consent to participate in the study, first for the workshops and then for the writing and analysis process. The project did not need ethical approval according to the Swedish Ethical Review Authority. However, the Committee for Good Research Practices and Ethics at University West has approved the project (registration number F 2025/2).

## **Findings**

The ontological findings are presented first, followed by the findings of the collaborative analysis of definitions.

### **Ontological findings**

Considering the often cited articles, there was no indication of a single core origin of WIL. Instead, WIL has been informed by two distinct concepts. Moving from left to right in Figure 1 shows “situated learning” (green) and “collaboration and partnership in learning for working life” (yellow). While there is evidence of linkages between these themes (see straight-line connections in Figure 1), these appear to be distinct concepts. The definitions of WIL appear to be influenced by situated learning, which emphasises the importance of *authenticity*; as well as collaboration and partnership in learning for working life, which emphasises *coordination* and *co-operation*. The more recent research (blue) presents intertwined themes of WIL.

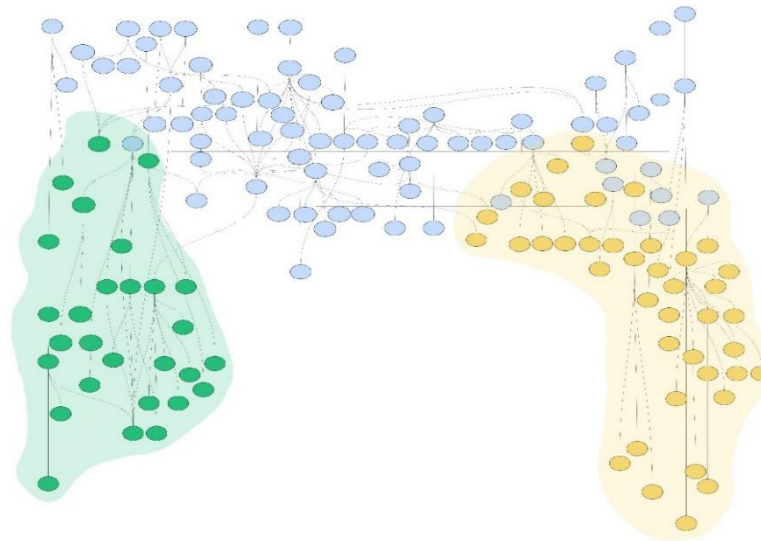


Figure 1: Visualisation of ontological mapping  
Source: Masterson, D. (co-author)

### Examples of Situated learning and Collaboration and partnership in learning for working life

In the green cluster (*Situated learning*), WIL can be described as an educational approach featuring a pedagogical curriculum designed to integrate discipline learning with practical workplace learning (Smith, 2012). Within this framework, students engage in designed structured activities, such as reflection journaling during professional work practice, to acquire skills and knowledge pertinent to their field. Integrative learning is a central part of WIL curricula. Smith (2012) states that WIL is distinct from just physical authentic work experience or work-based learning, which does not require students to integrate established disciplinary knowledge with workplace practice. This definition is consistent with the situated learning framework proposed by Lave and Wenger (1991), which emphasises the context-dependent nature of learning processes. Another source linking back to learning theory publications such as Lave & Wenger (1991) and Kolb (1984) is a project report by Smith et al. (2009). This report described WIL as an educational portal for providing services and experiences contributing to career development learning.

In the yellow cluster (*Collaboration and partnership for working life*), Rampersad (2020) mention WIL alongside a list of kinship terms: experiential learning, cooperative education, industry-partnered active learning, and professional development programs and cite their previous work (2015). The argument is that WIL includes experiential learning to prepare students for ‘real-world problems’ and is guided toward competencies sought after in the future. The same linkage is used by Rampersad (2015) when describing WIL as consisting of five types of WIL: co-operative education, work-based learning, workplace learning programs, community service, and work placements. This description limits WIL to those specific types and presents WIL as an umbrella, encompassing those five types. It is a pragmatic angle on WIL where WIL is discussed in terms of what means enable us to achieve WIL and where perhaps the most pragmatic aspect of it is settled, which is to prepare students for the future in collaboration and partnership with working life.

An example connection between the clusters is Helyer and Lee (2014), who briefly mention WIL and refer to Billett (2011), but they also use other sources and discuss similar terms. They cite Eames and Bell (2005) when writing about learning in the workplace and they cite Cooper et al. (2010) for the statement that students need to be active in workplace experiences. In Helyer and Lee’s (2014) reference to Billett’s (2011) article, there is no definition of WIL, but a statement that experiential learning could include other terms, and then these are listed; “work-based learning, cooperative learning, work-integrated learning, internships and placements” (p. 365). Hence, Helyer and Lee (2014) exemplify how WIL is mentioned but not defined.

### The findings of the collaborative analysis of extracted definitions

The findings of the collaborative analysis of extracted definitions from included articles was intended to explore definitions of WIL in often-cited WIL scientific articles. The findings from the sample are presented based on how WIL was described



and from which sources, to understand further the experienced usefulness of potentially found definitions of WIL for future research. The usage of definitions was diverse, in some publications clear and related to commonly known WIL sources.

However, publications often mention WIL without providing a definition, instead referring to a definition, or describing what WIL is in the context of the publication. As the lack of WIL definitions was evident early in the analysis, the analysis also included exploring if the cited references regarding WIL provided definitions of WIL. In extracting WIL definitions from literature cited in WIL publications, four main findings occurred: *Intertwining concepts*, *Intentions of WIL*, *Implementation of WIL* and *Diversity in defining WIL*. The findings are presented with examples from explored sample.

### Intertwining concepts

Commonly, the definition of WIL in a publication is based on several diverse sources combined to form a comprehensive definition of WIL. As for example, Rampersad (2015) defines WIL by including several sources, where the used sources represent different key areas of WIL: structured integration of classroom studies and work experiences (Groenewald, 2004), triple partnership (student, educational organization and workplace) with their respective responsibilities (Abeysekera, 2006) and reflection on learning (Katula & Threnhauser, 1999). More specifically, Rampersad (2015) refers to Groenewald (2004) who defines WIL as “a structured strategy for integrated classroom learning through productive work experiences in a field related to a students’ academic or career goals” (p.17) without, however, including a clear definition in their publication. Further, Rampersad (2015) continues with appraising the qualities of WIL and connects this with work-based learning as a form of WIL to integrate learning between learning in the workplace and the curriculum. Rampersad (2015), through citing Katula and Threnhauser (1999), also links to Hernandez-March et al. (2009) which carries no specific definition of WIL but writes extensively of the benefits of WIL based on a definition by Calway and Murphy (2007). This definition narrows it down to “labor practices in companies carried out by students while at university which are the object of academic supervision and coordination” (p. 6). As it is formulated, WIL is devoid of the reflective qualities that are otherwise often present in other narrower definitions but are instead reduced to quite formulaic practice. Hernandez-March et al. (2009) also refer to Coll and Zegwaard (2006), who refer to Braunstein and Loken (2004) to position WIL as combining classroom periods with periods in authentic work settings where experiential learning takes place.

When different concepts are considered as intertwined, it is important also to know what the cores and limitations of each concept entail. Dhliwayo (2008) is rich in definitions, though somewhat conflicting. As an example, Dhliwayo refers to Groenewald (2003) which states WIL is defined as a “structured educational strategy that progressively integrates academic study with learning through productive work in a field related to the student’s academic or career goals, not as an add-on, but as an integral part of the educational process” (p. 330). To this definition another definition is added that states that WIL is “the component of learning that focuses on the application of theory in authentic work-based context. It addresses specific competencies identified for the acquisition of a qualification which relates to the development of skills that will make the student employable [...]” (p. 330). Though seemingly harmonised, there are some noteworthy differences in the details of the wordings, where the first could be said to focus on what to do to have a work-integrated practice, that is to go out and be present in the field, and the second one is about what constitutes WIL, it is the application of theory in practice.

Pang et al. (2018) use a definition of WIL that is broad and intertwined with other concepts: “Through strategic partnerships with industry, universities have instituted programmes to expose students to the workplace, thereby reducing the initial shock of reality quite different from academia. These experiences may be described as “practicum”, “gap-year”, “internship”, cooperative educational experience”, or “work-integrated learning” (Hascher et al., 2004; Knouse & Fontenot, 2008; Martin et al., 2012). The commonality between them is that students are immersed in a work environment, arranged or endorsed by their university, to experience the routines of employment.” This description focuses on the intention of minimising the reality shock of working and understanding work routines, but not on the integration between theoretical knowledge related to a certain theoretical competence and integrating this theory into practice. The origin of this definition of WIL goes back to Hascher et al. (2004) (educational focus) but also connects to business college internship (Knouse & Fontenot, 2008) and employability (Jackling & Natoli, 2015). There are linkages in Pang et al. (2018) that focus on graduate success from the perspectives of the employers, and references Jackling & Natoli (2015) who focus on the step before this; how internship can enhance employability.

Patrick et al. (2008) provide a generic definition of WIL, with the overall emphasis on the designed and purposeful

integration of theory and practice. WIL is here a phenomenon that needs to be sculpted and arranged, as an opposite to something that is self-regulating and emergent. The definition does not provide any specific boundaries or contexts. This opens for the definition being used in a range of WIL activities, and one example is work placements (Ajjawi et al., 2020), but this is problematic if the understanding becomes that work placements are equivalent to WIL. It could be said that WIL is seen as a learning theory and what is particular about it is the integration of theory and practice. Patrick et al. (2008) is linked to several clusters of WIL researchers, and as such brings together publications as Clarke (2018), Bridgstock and Jackson (2019) and Ajjawi et al. (2020). This cross-linkage indicates that the definition by Patrick et al. (2008) is an important definition in WIL, as it has been cited across groups of linked authors.

### Intentions of WIL

The findings showed how WIL is used to present an intention of an educational action, such as increasing employability, and where WIL was seen as a tool to ensure this outcome. This is a different angle than exploring WIL from the perspective of how the integration of theory and practice takes place or can be enhanced during an educational intervention. This implies the different research focuses on WIL: the focus on the long-term outcome of using WIL and the focus on the learning situation within WIL.

Clarke (2018) does not provide any explicit WIL definition but uses WIL indirectly as a strategy to enhance graduate employability. To note is that internships are mentioned as a strategy on its own, which signals that WIL is not only an internship. A natural assumption would be that WIL is something more, but it is difficult to know since it is not shown in the citation. Clarke (2018) cites Freudenberg et al. (2011), a publication that is about students' generic skills and that describes what WIL programs are with emphasis on combining 'learning and its workplace application'. Both Clarke (2018) and Freudenberg et al. (2011) uphold the understanding of WIL being an instrument to achieve a certain level of skills in students where theory and practice are mentioned as self-explanatory aspects of students learning. It implies that achieving a fusion, presumably a balanced and efficient one, lies first and foremost within the responsibility of the educators. Or at least firstly within the responsibility of educators and later within the execution by students. Freudenberg et al. (2011) refer to Atchinson et al. (2002), which illustrates a quite stable line of thought about what WIL is over the years – it is an instrument to enhance students' skills and turn them into the ready-made workers.

### Implementation of WIL

Dredge et al. (2012) focuses on that students rather reflect about practice experiences at the same time as they think about "the application and relevance of theoretical concepts and models" (p. 2158). Dredge et al. (2012) presents a definition based on Cooper et al. (2010), where WIL is defined as:

"the intersection and engagement of theoretical and practice learning. The process of bringing together formal learning and productive work, or theory and practice. Constructing one system using available knowledge from several separate sources. Other terms used to describe WIL include practicum, internships, fieldwork, cooperative education, field education, sandwich course, service learning, international service learning." (p. xiii).

Jackson's (2014) research could be understood as a practical example, perhaps even theory testing – as it provides a model to test skills and competences. WIL here equals "incorporation of work experience into undergraduate degree programmes" (Jackson, 2014, p. 4). The article builds on the concept of employability, students' skills, and the needs of industry. In addition to this, Jackson (2017) also refers to Katz et al. (2011), Trede (2012), and Grace and Trede (2013). With reference to Katz et al. (2011), Jackson (2017) defines WIL as "represent[ing] the intersection of workplace and on-campus learning" (p. 838) and to be "fundamental to the construction of professional identity" (p. 838). What "the WIL experience" includes is also stated, namely:

"elements of observation, networking and connecting with industry professionals and therefore provides a unique opportunity to expose students to the common elements of pre-professional identity, as well as those more nuanced to a particular profession" (p. 835).

However, it is less of a definition of WIL, rather a statement of what a WIL program may include. Jackson (2017) includes the concept of reflection, as important for the students' affective development (refers to Clouder, 2005 for this specific term). Jackson (2017) also refers to Billett (2011) and Smith (2009). Clouder (2005) concerns professional development of healthcare students and does not have a definition of WIL, but it distinguishes WIL from extra-curricular work experience. WIL is enhanced through reflection. Jackson (2017) also covers what WIL does for the students, namely that it allows them to transition into professionals, with reference to Ashton (2011). On page 846 there is a reference to WIL as "the in-between space, the space where self and professional meet", which is a direct quote from Trede (2012). While WIL in one formulation is a strategy, it is in a second a component of learning, which is a different thing. The former speaks of a more over-arching ambition to structure studies as a whole and bring them all in under the WIL umbrella, while the second speaks of a more isolated part, even though important. This difference is also mirrored in the ambitions of the definitions. The first is more process-oriented and brings forward the interplay between academia and the world of work by focusing on "integration". There is neither a mention nor a specification of the locality of the learning process, which is an indication of understanding WIL as something that takes place both inside and outside the walls of the higher learning institution.

The progression that is mentioned is a progression of integration. Understanding WIL as "a component of learning" is more instrumental and does not carry the same focus on a progressive process of integration and back-and-forth movement between academia and the world of work. Instead, what is in focus here are applications of theory, specific competencies, acquisition of a qualification, and employability. Thus, in this definition, WIL is more a means towards a specific end. The process, as such, is not specified, and WIL is assumed to be something that takes place in settings outside the higher education institution when theory is applied.

Dhliwayo (2008) explicitly states that: "[n]o distinction is made in this article between the terms teaching and training or among the terms, experiential learning, cooperative education, service learning and work integrated learning [sic]" (p.229). Rather than explaining how the terms relate to each other and acknowledging their conventional distinctions in both form and content, they are presented as a single phenomenon with different names. Dhliwayo (2008) uses the term experimental learning as equal to WIL in entrepreneurship education and training but also refers to Groenewald (2003), a publication which focuses on integration of theory to authentic practice experiences. When a concept such as WIL is equalled to experimental learning, it is problematic, as experimental learning can be performed outside of an authentic practice setting, while the authentic practice setting is a prerequisite for WIL.

Another starting point is when WIL seems to be equalled to training as in Hernandez-March et al (2009). They refer to publications describing WIL in more detail and as an educational strategy encompassing an experimental learning experience in an authentic work situation and linking the concept to co-operative education.

There are also publications stating a more apparent intention of WIL. Rampersad (2020) presents the focus of "experimental learning" and the immersiveness of WIL compared to simply bringing in cases or presentations from practice to teaching situations, and the drive for innovation through this approach when describing WIL. Thus, the description of WIL here is both describing WIL (as experimental and immersive) and focusing on the value of WIL (innovation for the future).

Russel et al. (2008) discusses a WIL activity where they advocate for business plan competitions to be seen as WIL. This is a way of expanding how WIL can be used. Although the authors do not present an exact definition, they present the important learning components of WIL (theory and practice integration in an authentic practice experience) as a key for including business plan competitions as being WIL activities within the field of entrepreneurship and management. They refer to publications related to co-operative education, which probably is their starting point for their argument of expanding WIL in the direction they suggest.

### Diversity in defining WIL

In summary, the identified WIL definitions show a diversity in intentions and implementation of WIL, also showing that WIL research often insufficiently use definitions of WIL. This indicates that there is a need for a continued discussion of defining WIL while also highlighting the importance of using definitions in research and the importance of context when using a definition of WIL.



There are several examples of how often-cited sources of WIL research do not in themselves provide a clear WIL definition. For example, some researchers frequently cite Holmes (2013) to build their case of a WIL definition even though the publication does not clearly present a definition of WIL. This is not an uncommon pattern as there are also other publications being cited to define WIL, while not actually having a clear definition of WIL, for example, Eames & Bell (2005) and Groenewald (2011).

In the publication by Clarke (2018), the importance of WIL is implied, and there are several links to publications by Jackson. Jackson et al. (2017) refer to WIL definitions by Ferns et al. (2014) as not being a form of tokenistic engagement with the workplace, advocating for the use of intentional pedagogy to effectively blend theoretical content with practical workplace practices. Jackson (2017) offers a broader WIL definition, encompassing experiential learning, cooperative education, and work-based learning. This approach seamlessly combines practical work experience with classroom instruction, linking students to the industry and allowing them to apply their knowledge in a supportive work environment as part of their academic curriculum. Further, Jackson (2017) indicates that WIL should be perceived as a learning opportunity necessary for students to develop a pre-professional identity. The relevance of context related to WIL in research and practice suggests the need for defining WIL in a way that is adaptable to diverse contexts.

Fullagar and Wilson (2012) describe and understand WIL in relation to tourism and hospitality studies. After arguing that “in addition to work-integrated learning opportunities, tourism and hospitality studies can embrace critical pedagogies through the notions of ‘reflective praxis’” (p. 4) the combination of WIL and critical pedagogies is then understood in the following way: “By bringing theories and praxis together in applied management and everyday contexts, these different forms of knowledge enable students consider how they make sense of and respond to the key issues of the times” (p. 4). This represents a quite rare instance when WIL is connected to critical studies in the form of critical pedagogies. In this, “reflective praxis” (p. 4) plays a central part, and the perceived and sought-after outcome is not explicitly employability or certain specified work-skills, but the skill of sense-making of the world and being an active participant in contemporary society. This points to a specific quality in the process of WIL, not often spoken of in the rest of the data. They emphasise this through the argument that “[b]uilding on the renaissance of critical thinking within business education we see a real strength in many tourism and hospitality programs being “work-integrated learning” (p. 4). Again, this represents a different focus of WIL. In addition to WIL opportunities, the authors reflect that tourism and hospitality courses can incorporate critical pedagogies through the concept of reflexive ‘praxis,’ (Brookfield, 1995). The authors state that this approach bridges theory and practice, allowing students to reflect critically on their understanding of contemporary work experiences. This is not a definition of WIL, but a statement regarding the value of WIL. As WIL in this article is written in brackets, it is likely to be believed that this is a novel concept in the context or for the authors. Fullagar and Wilson (2012) cite a complete conference proceeding book in their writing about WIL, but as several different conference papers mention WIL, it is unclear how they define WIL depending on this citation. The other used citation for explaining the concept of WIL is Lashley (1999), which does not use the term WIL in the text. This use of references indicates that Fullagar and Wilson (2012) have concluded what WIL is in their paper but not used a specific definition of WIL.

The definition of Smith (2012) builds on Ballantine and McCourt Larres (2007) who translates WIL into an explicit strategy of how to produce work ready graduates, a sort of ready-made of knowledge that is neatly packaged and supposedly easily accessible once the students are in the real work life. Smith (2012) conceptualises WIL as a benchmark against which the courses should be created and provides even stricter criteria for a real WIL course. The criteria consist of the key rules of how such a course should be carried out (hence, WIL here is equal to a pedagogical approach).

## Discussion

In this project, it became clear that the term “definition” also needed to be discussed, especially when performing interdisciplinary research where different research traditions meet. As definitions serve both as metadiscursive and ideational purposes in an academic text (Triki, 2019), such discussions are fruitful for bringing an interdisciplinary research field forward. The findings should be considered from the perspective that not all publications included in the sample engage with the WIL discourse despite using the term WIL, but other wordings, terms and concepts for another purpose in their article. However, when using the term WIL, it is essential to define its meaning, as there is diversity in the

understanding of the term. This diversity aligns with previous research on definitions in other research fields, where studies have shown that definitions vary in forms and usage (Triki, 2019). Instead of being standardised, the use of definitions is often influenced by functional reasons and disciplinary practices. This further emphasises the importance of exploring and discussing the understanding and use of definitions of WIL, as the rapidly expanding research field of WIL connects to several disciplines and thus cannot lean on one specific disciplinary tradition.

The findings provide further evidence of the importance of defining WIL when writing about WIL. Defining WIL is often a challenging endeavour as previous research manifests a scattered understanding of what WIL is. It is problematic to assume that the readers (both in the scientific community and in society) will have a clear view of what WIL is and is not. However, this explanation can be too simple, as WIL is also contextual; therefore, definitions and descriptions of WIL need to be contextualised to ensure the writers' and the readers' shared understanding of WIL. As WIL researchers, our advice is to ensure that when citing WIL, there is a definition or a clear description of what WIL is in the cited article. Otherwise, as a researcher, it is not certain that you, define WIL in the same way the term WIL is used in the cited work. This may seem like logical and straightforward advice, but the findings in this study show that clearly defining WIL in research is often not done sufficiently. If not, there will be continuous examples of just referencing to the phrase WIL, not to the content of a definition, or referencing to a previous reference, sometimes even out of context.

The diversity within WIL research can be considered a limitation of the importance of the research field. Consequently, WIL can be debated as a research discipline for the same reason. However, this diversity can also show the strength of WIL as a research discipline, as WIL is gaining attention in variety of settings. This, in turn, promotes the idea of accepting different understandings of the concept of WIL, depending on context. As WIL research is increasing (Amarathunga, 2024; Areskoug Josefsson et al., 2024), there will likely be further development of the understanding and definition of WIL in future WIL research. Early articles, even though they use the term WIL or are cited by others to define WIL, such as in Eames & Bell (2005), (2010) and Groenewald (2011) do not state any clear definitions. The article by Groenewald (2011) titled "*Towards a definition and models of practice for cooperative and work-integrated education*", points to this lack, indicating that it introduces the idea and demand for a definition. This may be the reason that this publication is cited by more recent research.

As a general observation from the findings, there are tendencies to equate WIL to practice, which begs the question of how much theory, and reflection of integration between theory and practice there is in the definition of WIL. This may be even more challenging in higher education, or at advanced and PhD level. This points to a general problem within the field of WIL research, where, on one hand, WIL as a term is used for synonymous functions, and on the other hand, that WIL as a concept is underdeveloped. It is a quite common practice to, in an uncomplicated matter, use WIL as a term for practicum or educational curricula that includes practicum, which – if only used this way – actually would make WIL as a term quite redundant. It is not another term besides others that describes an established feature of education that is needed. Therefore, what is needed is the development of the concept of WIL, capturing WIL as a phenomenon, whether this phenomenon takes place within higher education, in other educational institutions or working life (Björck, 2020; Zegwaard et al., 2023). It should help us describe, analyse and understand the relationship between learning and working life by exploring the complex relation and back-and-forth movement between theory and practice (notwithstanding what in the end may be a fruitless attempt to distinguish the two as totally separate entities). Sometimes implicitly, sometimes explicitly, WIL research is concerned with exactly this on one level or another: understanding and handling the relation between theory and practice, between theoretical and practical knowledge.

The finding shows examples of differences between WIL and specific theories of workplace-based learning, referring to Billett (2001) as well as Boud and Solomon (2001). Unlike WIL, these theories do not emphasize the objective of merging discipline-specific knowledge, skills, professional practices, or identity with the actual experience of being in a workplace and engaging in work-related activities. Accordingly, in this respect, WIL excels and cannot be equated with workplace learning theories. WIL requires the profession's authentic environment and a connection to authentic professional knowledge, implying that work-integrated education in higher studies should incorporate both equally. Even though WIL is still presented as an inclusive term covering a range of related work-focused learning models, the way these definitions are understood and used varies (Zegwaard et al., 2023). To gain clarity and drive the development of WIL as a research field, we also need research that clarifies what distinguishes WIL from other work-focus learning approaches and what WIL is not. This is important even if there are overlaps in definitions, as clarifying concepts add to the understanding

when a particular concept or definition is appropriate to use and provides a more in-depth understanding of what has been done in scientific publications related to WIL.

This project provides additional knowledge of how definitions have been used in WIL research, and how the understanding of the concept of WIL has been transforming in a variety of settings. There is a lack of defining WIL in often cited articles. The added knowledge from the findings provides implications of the importance of how to use definitions of WIL in future research.

The findings include publications highlighting WIL's role in enhancing critical thinking and connecting theory with practice through reflexive pedagogy. This approach encourages students to connect their theoretical learning to work-life experiences, essential in fields like tourism, where practical skills are as important as theoretical understanding (Fullagar & Wilson, 2012). This integration is also important in areas such as healthcare (Pennbrant & Svensson, 2018). The authors state that practice and theory traditionally have been seen as separate domains. However, this separation is no longer apparent. It can be argued that theoretical and practical knowledge are regarded as equally important independently, and knowledge creation occurs in various contexts throughout society, mainly as people engage daily in their professions. WIL occurs when traditional educational institutions and workplaces are connected through the concept of reflexive 'praxis' (Brookfield, 1995), where students critically reflect on how they use their knowledge in work experiences. Encouraging individuals to question and reconsider their perceptions, evaluations, understandings, and actions during and on WIL experiences plays a crucial role in fostering a systematic reflection process (Pennbrant et al., 2019). Engaging in reflective practice enables learners to critically analyse their achievements and challenges within experiences. This analysis empowers them to make informed decisions about future learning needs and career development pathways. This process enhances the depth of learning and supports personal growth and professional preparedness, as WIL is recognised as a valuable tool for enhancing employability.

WIL is less present in PhD education than at other educational levels (Bracewell et al., 2024; Massyn & Areskoug Josefsson 2024) thus, PhD students encounter considerable challenges in fully capitalising on these workplace advantages. This difficulty primarily stems from the focus of doctoral education on academic achievements and publications, which often limit opportunities for practical experience and social engagement within the academic community. Moreover, PhD programs usually lack clearly defined WIL components, such as educational and work placement experiences, which are commonly found in WIL undergraduate programs. The collaboration in the current project is perceived as a valuable WIL experience in a workplace setting for PhD candidates that is not commonly provided outside the educational setting. It is particularly noteworthy for integrating various academic disciplines and professional categories, which provides essential workplace learning opportunities for early-career professionals. Involving participants from diverse academic backgrounds throughout all phases of the collaborative project can foster mutual WIL understanding and provide a WIL experience for everyone involved, including both junior and senior members.

The project's secondary aim was to explore a collaborative writing process and to write in a unified voice (Ritchie & Rigano, 2007), ensuring that all participants had an equal opportunity to contribute to the writing process. WIL is to also benefit from practical experiences in the workplace, as provided by this joint project. Through recognition of one's own learning processes and reflection on work experiences, this can lead to a deeper professional understanding and support useful professional strategies for academic work.

### Methodological discussion

The findings are based on a sample of WIL research articles and are not to be considered a comprehensive picture of the research field. However, considering the homogeneity of the findings in the sample, it is evident that the use of clear definitions within WIL research can be improved. Understanding of the experienced usefulness of WIL definitions by WIL researchers needs to be explored in greater depth, preferably in qualitative studies, as this method did not provide sufficient depth to explore this issue entirely. Further studies related to how definitions of WIL are used in WIL research in specific contexts are recommended, as well as additional discussions of the usefulness of WIL definitions in diverse research settings and across disciplines. A key feature in the manuscript writing process was shared learning and an intention to ensure that the perspective of future WIL researchers was incorporated throughout the research process. This process was feasible, but a facilitator was required for the writing process and a facilitator for the Miroboard. The pragmatic choice of having a lead-author (facilitator) was to ease the collaborative academic writing process as this is a traditional way of

collaborative academic writing that many researchers are familiar with (Ritchie & Rigano, 2007). The facilitators could respond to questions, share answers with the wider group, and collate novel traits of understanding the findings. The use of a data collection presentation facilitator may be less important in other types of collaborative research writing. Nevertheless, because interactive data presentation with Miroboards represented a new way of working for a majority of the research group, this was an asset in maintaining the timeliness of the research process during the writing phases.

The collaborative research process can be critiqued for not being participatory throughout the research process, as a core group was designing the project. However, this was a pragmatic choice, considering that the project was to be performed without funding and with respect to PhD students' limited time to engage in projects outside their research project. There were also PhD students and senior researchers who found the research process demanding as it differed from the research processes that they were used to and due to the interdisciplinarity of the project. The writing and continuous analysis was designed to create a sense of peer pressure, while not requesting too much time investment, and keeping the mind on the project, and thus minimising start-up time when starting to write. Adding peer-pressure can be seen as a risky endeavour as there is perceived stress among academics (Massyn, 2023). The intention was to ensure the writing was prioritised, happened and instead supported the creation of daily feelings of accomplishment related to scientific writing. This can also be considered relevant aspects of WIL for working life in academia, as interdisciplinary collaborative work, strategies for handling diversity of work tasks, and academic writing are part of work in academia.

PhD students described the benefits of collaborative work, noting that it provides practical experience that is valuable for their academic careers. As WIL activities are often limited in PhD education, we also considered this project a WIL activity for the professions of researchers, where joint academic writing, interdisciplinary collaboration, and reflection are key skills. PhD students' opportunities of WIL for a future career in academia are not sufficiently addressed (Bracewell et al., 2024; Massyn & Areskoug Josefsson 2024). Instead, assumptions may be that the PhD education provides sufficient knowledge of how to work in academia. However, collaborative research processes can support interdisciplinarity and, hopefully, quality culture through the interdisciplinary work and documented strategic process that has been part of this project.

A collaborative academic writing process includes several people reading, writing, and revising, which often includes a wider range of references and perspectives in the included references (Austin et al., 2021). Although each person wrote separately, the purpose was to communicate in a joint voice, as described by Ritchie and Rigano (2007). This is challenging, especially for writers less experienced in academic writing who work to find their own academic voice in writing. It can be argued that almost all academic writing is collaborative (Austin et al., 2021), but the collaborative intent and use of specific methodological processes used here are not as common. Consensus meetings could have increased feelings of ownership of the paper (Ritchie & Rigano, 2007) but also slowed down the process, thus risking that PhD students would have graduated and thus not have had the same time to partake throughout the projects' final phase.

## Conclusion

This project is innovative concerning the design of the project and had the intention to provide both WIL in PhD education and, at the same time, lead to research outcomes that promote WIL research. By encompassing the complexity and diversity in the world of WIL, the article further enhances the understanding of WIL, thus supporting future WIL research. The findings also show the importance of using and citing definitions of concepts to ensure a shared understanding of the concept from the perspective of the author, the reader and those who have been referred to. There is a need to refine the use of definitions of WIL in WIL research and a need for scientific forums for discussion and debate of definitions of WIL. These findings fulfil the primary aim of the article. The chosen sample can be seen as a limitation of the study, and future research focusing on how WIL definitions are used in specific contexts could further expand the knowledge of how definitions of WIL are used in research.

Concerning our second aim, to explore the feasibility of collaborative research writing, clear results have been identified. Using collaborative writing processes provides authentic research collaboration experiences. This proved to be a feasible way of including WIL in PhD education, and especially if the intended future career is being a researcher, it offers an important experience. Furthermore, it also represents the "multidimensional learning phenomenon" (Björck &



Willermark, 2024, p. 2) that involves both PhD students and senior researchers in a typical case of the integration of work and learning. Further research of how to optimize WIL in PhD education is recommended.

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## Declaration of interests

The authors declare no competing interests.

## References

- Abeysekera, I. (2006). Issues in designing a work-integrated learning program in an undergraduate accounting degree program and its implications for the curriculum. *Asia-Pacific Journal of Cooperative Education*, 7(1), 7-15.
- Ajjawi, R., Tai, J., Huu Nghia, T. L., Boud, D., Johnson, L., & Patrick, C.-J. (2020). Aligning assessment with the needs of work-integrated learning: the challenges of authentic assessment in a complex context. *Assessment & Evaluation in Higher Education*, 45(2), 304-316. <https://doi.org/10.1080/02602938.2019.1639613>
- Amarathunga, B. (2024). Work integrated learning and trending areas for future studies: a systematic literature review and bibliometric analysis. *Asian Education and Development Studies*, 13(2), 97-116. <https://doi.org/10.1108/AEDS-12-2023-0175>
- Areskoug Josefsson, K., Näverå, E., Wilner, A., & Masterson, D. (2024). A Bibliographic review of Work-Integrated Learning Research. *International Journal of Work-Integrated Learning*, 25(4), 517-535.
- Ashton, D. (2011). Media work and the creative industries. *Education + Training*, 53(6), 546-560. <https://doi.org/10.1108/00400911111159494>
- Atchison, M., Pollock, S., Reeders, E., & Rizzetti, J. (2002). *Work integrated learning paper RMIT*, Melbourne.
- Austin, D., Bessemer, Y., Goff, S., Hill, G., Orr, L., & Vaartjes, V. (2021). Collaborative writing as action research: A story in the making. *Action Learning and Action Research Journal*, 27(1), 36-62. <https://alarj.alarassociation.org/index.php/alarj/article/view/323>
- Ballantine, J., & McCourt Larres, P. (2007). Cooperative learning: a pedagogy to improve students' generic skills? *Education + Training*, 49(2), 126-137. <https://doi.org/10.1108/00400910710739487>
- Billett, S. (2001). *Learning in the workplace: Strategies for effective practice*. Allen & Unwin.
- Billett, S. (2011). *Curriculum and Pedagogical Bases for Effectively Integrating Practice-based Experiences*. Australian Teaching and Learning Council.
- Björck, V. (2020). *Learning 'theory' at university and 'practice' in the workplace: A problematisation of the theory-practice terminology that the dualistic design of Work-integrated Learning institutionalizes*. (Phd Dissertation University West). <https://urn.kb.se/resolve?urn=urn:nbn:se:hv:diva-16063>
- Björck, V., & Willermark, S. (2024). Where is the 'WIL' in Work-integrated Learning Research? *Studies in Continuing Education*, 1-15. <https://doi.org/10.1080/0158037X.2024.2378718>
- Boud, D., & Solomon, N. (2001). *Work-Based Learning: A New Higher Education?* Open University Press
- Bracewell, K., Sheridan, I., & Cassidy, S. (2024). A review of work-integrated learning for PhD students. *International Journal of Work-Integrated Learning* 25(2), 201-214.
- Braunstein, L. A., & Loken, M. K. (2004). Benefits of Cooperative Education for Employers. In R. K. Coll & C. Eames (Eds.), *International Handbook of Cooperative Education. An International Perspective of the Theory, Research and Practice of Work-integrated Learning*. World Association for Cooperative Education.
- Bridgstock, R., & Jackson, D. (2019). Strategic institutional approaches to graduate employability: navigating meanings, measurements and what really matters. *Journal of Higher Education Policy and Management*, 41(5), 468-484. <https://doi.org/10.1080/1360080X.2019.1646378>
- Brookfield, S. (1995). *Becoming a critically reflective teacher*. Jossey-Bass.
- Calway, B. A., & Murphy, G. A. (2007). The Educational Imperatives for a Work-integrated Learning Philosophy. *Journal of Cooperative Education and Internships*, 41(2), 12-22.
- Clarke, M. (2018). Rethinking graduate employability: the role of capital, individual attributes and context. *Studies in Higher Education*, 43(11), 1923-1937. <https://doi.org/10.1080/03075079.2017.1294152>



- Clouder, L. (2005). Caring as a 'threshold concept': transforming students in higher education into health(care) professionals. *Teaching in Higher Education*, 10(4), 505-517. <https://doi.org/10.1080/13562510500239141>
- Coll, R. K., & Zegwaard, K. E. (2006). Perceptions of desirable graduate competencies for science and technology new graduates. *Research in Science & Technological Education*, 24(1), 29-58. <https://doi.org/10.1080/02635140500485340>
- Cooper, L., Orrell, J., & Bowden, M. (2010). *Work Integrated Learning. A Guide to Effective Practice*. Routledge.
- Dhliwayo, S. (2008). Experiential learning in entrepreneurship education. *Education + Training*, 50(4), 329-340. <https://doi.org/10.1108/00400910810880560>
- Dredge, D., Benckendorff, P., Day, M., Gross, M. J., Walo, M., Weeks, P., & Whitelaw, P. (2012). The philosophic practitioner and the curriculum space. *Annals of Tourism Research*, 39(4), 2154-2176. <https://doi.org/https://doi.org/10.1016/j.annals.2012.07.017>
- Eames, C., & Bell, B. (2005). Using sociocultural views of learning to investigate the enculturation of students into the scientific community through work placements. *Canadian Journal of Science, Mathematics and Technology Education*, 5(1), 153-169. <https://doi.org/10.1080/14926150509556649>
- Ferns, S., Campbell, M. P., & Zegwaard, K. E. (2014). Work integrated Learning. In: *Work Integrated Learning in the Curriculum HERDSA Guide*, ed. S. Ferns, 1-6. Hammondville: Higher Education and Development Society of Australasia.
- Ferns, S. J., Zegwaard, K. E., Pretti, T. J., & Rowe, A. D. (2025). Defining and designing work-integrated learning curriculum. *Higher Education Research & Development*, 44(2), 371-385. <https://doi.org/10.1080/07294360.2024.2399072>
- Freudenberg, B., Brimble, M., & Cameron, C. (2011). WIL and Generic Skill Development: The Development of Business Students' Generic Skills Through Work-Integrated Learning. *Asia-Pacific Journal of Cooperative Education*, 12(2), 79-93.
- Fullagar, S., & Wilson, E. (2012). Critical Pedagogies: A Reflexive Approach to Knowledge Creation in Tourism and Hospitality Studies. *Journal of Hospitality and Tourism Management*, 19(1), 1-6. <https://doi.org/https://doi.org/10.1017/jht.2012.3>
- Grace, S., & Trede, F. (2013). Developing professionalism in physiotherapy and dietetics students in professional entry courses. *Studies in Higher Education*, 38(6), 793-806. <https://doi.org/10.1080/03075079.2011.603410>
- Groenewald, T. (2003). Growing Talented People Through Cooperative Education: A Phenomenological Exploration. *Asia-Pacific Journal of Cooperative Education*, 4(2), 49-61.
- Groenewald, T. (2004). Towards a definition for cooperative education. In R. K. Coll & C. Eames (Eds.), *International Handbook for Cooperative Education: An International Perspective of the Theory, Research and Practice of Work-Integrated Learning* (pp. 17-25). World Association for Cooperative Education.
- Groenewald, T., Drysdale, M. T. B., Chiupka, C. & Johnston, N. (2011). Towards a definition and models of practice for cooperative and work-integrated education. In R. K. R. K. Coll & K. E. Zegwaard (Eds.), *International Handbook for Cooperative and Work-Integrated Education: International Perspectives of theory, research and practice* (2 ed., pp. 17-24). World Association for Cooperative Education.
- Hascher, T., Cocard, Y., & Moser, P. (2004). Forget about theory—practice is all? Student teachers' learning in practicum. *Teachers and Teaching*, 10(6), 623-637. <https://doi.org/10.1080/1354060042000304800>
- Helyer, R., & Lee, D. (2014). The Role of Work Experience in the Future Employability of Higher Education Graduates. *Higher Education Quarterly*, 68(3), 348-372. <https://doi.org/https://doi.org/10.1111/hequ.12055>
- Hernández-March, J., Martín del Peso, M., & Leguey, S. (2009). Graduates' Skills and Higher Education: The employers' perspective. *Tertiary Education and Management*, 15(1), 1-16. <https://doi.org/10.1080/13583880802699978>
- Holmes, L. (2013). Competing perspectives on graduate employability: possession, position or process? *Studies in Higher Education*, 38(4), 538-554. <https://doi.org/10.1080/03075079.2011.587140>
- Jackling, B., & Natoli, R. (2015). Employability skills of international accounting graduates: internship providers' perspectives. *Education + Training*, 57(7), 757-773. <https://doi.org/10.1108/ET-08-2014-0093>
- Jackson, D. (2014). Testing a model of undergraduate competence in employability skills and its implications for stakeholders. *Journal of Education and Work*, 27(2), 220-242. <https://doi.org/10.1080/13639080.2012.718750>
- Jackson, D. (2017). Developing pre-professional identity in undergraduates through work-integrated learning. *Higher Education*, 74(5), 833-853. <https://doi.org/10.1007/s10734-016-0080-2>
- Jackson, D., Rowbottom, D., Ferns, S., & McLaren, D. (2017). Employer understanding of Work-Integrated Learning and the challenges of engaging in work placement opportunities. *Studies in Continuing Education*, 39(1), 35-51. <https://doi.org/10.1080/0158037X.2016.1228624>
- Katula, R. A., & Threnhauser, E. (1999). Experiential education in the undergraduate curriculum. *Communication Education*, 48(3), 238-255. <https://doi.org/10.1080/03634529909379172>

- Katz, P., McGinnis, J. R., Hestness, E., Riedinger, K., Marbach-Ad, G., Dai, A., & Pease, R. (2011). Professional Identity Development of Teacher Candidates Participating in an Informal Science Education Internship: A focus on drawings as evidence. *International Journal of Science Education*, 33(9), 1169-1197. <https://doi.org/10.1080/09500693.2010.489928>
- Knouse, S. B., & Fontenot, G. (2008). benefits of the business college internship: a research review. *Journal of Employment Counseling*, 45(2), 61-66. <https://doi.org/https://doi.org/10.1002/j.2161-1920.2008.tb00045.x>
- Kolb, D. A. (1984). *Experiential Learning: Experience As The Source Of Learning And Development*. Prentice Hall. <http://www.learningfromexperience.com/images/uploads/process-of-experiential-learning.pdf>
- Lashley, C. (1999). On making silk purses: developing reflective practitioners in hospitality management education. *International Journal of Contemporary Hospitality Management*, 11(4), 180-185. <https://doi.org/10.1108/09596119910263586>
- Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate Peripheral participation*. Cambridge University Press.
- Martin, A., Rees, M., Edwards, M., & Paku, L. K. (2012). An organization overview of pedagogical practice in work-integrated education. *Asia-Pacific Journal of Cooperative Education*, 13(1), 23-37.
- Massyn, L. (2023). The Wellbeing Of Academics And Some Implications For Research Supervisors: A Scoping Review. *Journal for New Generation Sciences*, 21(1), 62-73. <https://doi.org/10.10520/ejc-newgen-v21-n1-a7>
- Massyn, L., & Areskoug Josefsson, K. (2024). *Work-integrated learning and PhD education*. WIL24, South Africa.
- Masterson, D., Areskoug Josefsson, K., Robert, G., Nylander, E., & Kjellström, S. (2022). Mapping definitions of co-production and co-design in health and social care: A systematic scoping review providing lessons for the future. *Health Expectations*, 25(3), 902-913. <https://doi.org/https://doi.org/10.1111/hex.13470>
- Nygren-Landgärds, C., Mårtensson, L. B., Pyykkö, R., Bjørnstad, J. O., & von Schoultz, R. (2024). Quality culture at Nordic Universities. *European Journal of Higher Education*, 14(1), 40-59. <https://doi.org/10.1080/21568235.2022.2116066>
- Pang, E., Wong, M., Leung, C. H., & Coombes, J. (2018). Competencies for fresh graduates' success at work: Perspectives of employers. *Industry and Higher Education*, 33(1), 55-65. <https://doi.org/10.1177/0950422218792333>
- Patrick, C.-J., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2008). *The WIL (Work Integrated Learning) report : a national scoping study* [Final Report]. Queensland University of Technology. <https://eprints.qut.edu.au/216185/>
- Pennbrant, S., Nunstedt, H., & Bernhardsson, L. (2019). Learning through reflection –The portfolio method as a tool to promote work-integrated learning in higher education. 13th International Technology, Education and Development Conference INTED2019, Valencia, Spain.
- Pennbrant, S., & Svensson, L. (2018). Nursing and learning – healthcare pedagogics and work-integrated learning. *Higher Education, Skills and Work-Based Learning*, 8(2), 179-194. <https://doi.org/10.1108/HESWBL-08-2017-0048>
- Piper, L., Dahlquist, K., Sunnemark, F., & Assmo, P. (2023). Rethinking WIL for an academic discipline: the model of Work Integrated Political Studies (WIPS). *Cogent Education*, 10(1), 2191397. <https://doi.org/10.1080/2331186X.2023.2191397>
- Rampersad, G. (2020). Robot will take your job: Innovation for an era of artificial intelligence. *Journal of Business Research*, 116, 68-74. <https://doi.org/https://doi.org/10.1016/j.jbusres.2020.05.019>
- Rampersad, G. C. (2015). Developing university-business cooperation through work-integrated learning. *International Journal of Technology Management*, 68(3-4), 203-227. <https://doi.org/10.1504/IJTM.2015.069664>
- Ritchie, S. M., & Rigano, D. L. (2007). Writing together metaphorically and bodily side-by-side: an inquiry into collaborative academic writing. *Reflective Practice*, 8(1), 123-135. <https://doi.org/10.1080/14623940601139087>
- Russell, R., Atchison, M., & Brooks, R. (2008). Business plan competitions in tertiary institutions: encouraging entrepreneurship education. *Journal of Higher Education Policy and Management*, 30(2), 123-138. <https://doi.org/10.1080/13600800801938739>
- Smith, C. (2012). Evaluating the quality of work-integrated learning curricula: a comprehensive framework. *Higher Education Research & Development*, 31(2), 247-262. <https://doi.org/10.1080/07294360.2011.558072>
- Smith, M., Brooks, S., Lichtenberg, A., McIlveen, P., Torjul, P., & Tyler, J. (2009). *Career development learning: maximising the contribution of work-integrated learning to the student experience*. Final project report June 2009 (9781741281729). <http://www.altc.edu.au/project-career-development-learning-maximising-uow-2007>
- Sunnemark, L., Sunnemark, F., Dahlquist, K., Gahnström, E., Assmo, P., & Piper, L. (2023). Bridging theory and practice through Work-Integrated Learning (WIL): critical perspectives on the conceptualisations of WIL at a university in Sweden. *Critical Studies in Education*, 1-18. <https://doi.org/10.1080/17508487.2023.2294462>
- Trede, F. (2012). Role of work-integrated learning in developing professionalism and professional identity. *Asia-Pacific Journal of Cooperative Education*, 13(3), 159-167.
- Triki, N. (2019). Revisiting the metadiscursive aspect of definitions in academic writing. *Journal of English for Academic Purposes*, 37, 104-116. <https://doi.org/https://doi.org/10.1016/j.jeap.2018.11.010>

Zegwaard, K. E., Pretti, T. J., Rowe, A. D., & Ferns, S. J. (2023). Defining work-integrated learning. In K. E. Zegwaard & T. J. Pretti (Eds.), *The Routledge international handbook of work-integrated learning* (Third edition ed., pp. 19-38). Routledge.

## Appendix 1

The steps of data extraction, collaborative writing and analysis are described in detail:

1. Data extraction
  - a. Piloting the data extraction excel file with ten articles to ensure consensus among the core research group (extraction of metadata, found definition/definitions (with used citation/citations), how the definition was understood to be used in the publication).
  - b. 2-hour data extraction online workshop where ten PhD students extracted data individually from five to six articles. As an added quality check of the data extraction, each PhD student shared a couple of articles with another PhD student.
2. Compiling preliminary results
  - a. Conversion of the extracted data in the excel file to a Miro board (an online shared whiteboard) presentation compiling the results.
  - b. 2-hour data analysis online workshop with eight PhD students and the core research group to discuss the found definitions, the value of them for their PhD research projects, and WIL practice and research in general. Presentation of linkage between the found definitions and which newfound cited definitions needed to be extracted from citations in the first data sample.
3. Data extraction
  - a. Data extraction from additional identified definition articles added to the Miro board.
4. Compiling results
  - a. Revision of Miro board presentation and adding a narrative to be used in the collaborative writing and analysis process.
5. Collaborative writing and analysis
  - a. Draft of manuscript by facilitator.
  - b. Collaborative two-week writing process in two groups of PhD students and core researchers (30 minutes of daily asynchronous writing and analysis individually in a shared group document). Continuous dialogue was enabled using post-it notes on the Miro board, which also enabled queries to be addressed, for example deeper dives into the search for the origin of definitions.
  - c. Compilation of the documents from each writing group to one manuscript draft by the facilitator.
  - d. Core research group online meeting to plan for the second collaborative writing weeks.
  - e. Collaborative two-week writing process in one group (30 minutes of daily asynchronous writing and analysis individually in a shared group document).
  - f. Consensus online meeting by all participants prior to finalising the manuscript.
  - g. Facilitator finalising the manuscript according to journal guidelines.
  - h. Individual reading of pre-final manuscript with minor revisions and agreeing on submission.
  - i. Submission to a scientific journal by facilitator.